

CLAIMS

What is claimed is:

- 5 1. A physical resistance training apparatus comprising:
means adapted for receiving a controllable pressurized flow of a fluid;
means, responsive to the flow of the fluid, adapted for generating a force along at least
one of a plurality of selected directions; and
means adapted for transferring the force to a user of the apparatus, wherein the transferred
10 force is adapted to supply physical resistance training to the user.
2. The apparatus of claim 1, wherein the means for generating the force comprises means
adapted for receiving the pressurized flow of the fluid, means adapted for discharging the fluid at
a selected rate, and means adapted for discharging the fluid along at least one of a plurality of
15 selected directions.
3. The apparatus of claim 2 further comprising a rate interface adapted to enable the
selection of the rate of discharge of the fluid.
- 20 4. The apparatus of claim 3, wherein the rate interface is adapted to be controlled by at least
one of the user of the apparatus, a person assisting the user in the user's use of the apparatus, and
an electronic device adapted to automatically control the rate interface.
- 25 5. The apparatus of claim 2 further comprising a direction interface adapted to enable the
selection of the direction of the discharge of the fluid.
6. The apparatus of claim 5, wherein the direction interface is adapted to be controlled by at
least one of the user of the apparatus, a person assisting the user in the user's use of the apparatus,
and an electronic device adapted to automatically control the rate interface.

7. The apparatus of claim 1, wherein the apparatus further comprises a source of pressurized fluid.

8. The apparatus of claim 1, wherein the means adapted for transferring the force to the user
5 comprises a user interface adapted for interfacing with at least one of a plurality of parts of a body of the user.

9. The apparatus of claim 8, wherein the user interface is adapted to interface with at least one of the user's head, foot, feet, hand, hands, arm, arms, leg, legs and torso.
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10. The apparatus of claim 1, wherein the apparatus is adapted to be moveable along at least one axis.

11. A method for physical resistance training adapted to be performed with a physical
15 resistance training apparatus, wherein the method comprises the steps of:

receiving, in a physical resistance training apparatus, a controllable pressurized flow of a liquid;

generating, in response to the pressurized flow of the liquid, a force along at least one of a plurality of selected directions; and

20 transferring the force to a user of the apparatus, wherein the transferred force is adapted to supply physical resistance training to the user.

12. The method of claim 11, wherein the step of generating the force comprises the steps of receiving the pressurized flow of the liquid, discharging the fluid at a selected rate, and
25 discharging the fluid along at least one of a plurality selected directions.

13. The method of claim 12, wherein the rate of discharge of the fluid is controlled by a rate interface adapted to enable the selection of the rate of discharge of the fluid.

30 14. The method of claim 13, further comprising the step of controlling the rate interface by at

least one of the user of the apparatus, a person assisting the user in the user's use of the apparatus, and an electronic device adapted to automatically control the rate interface.

15. The method of claim 12, wherein the direction of the discharge of the fluid is controlled
5 by a direction interface adapted to enable the selection of the direction of the discharge of the fluid.

16. The method of claim 15, further comprising the step of controlling the direction interface by at least one of the user of the apparatus, a person assisting the user in the user's use of the
10 apparatus, and an electronic device adapted to automatically control the rate interface.

17. The method of claim 11 further comprising the step of transferring the force to at least one of a plurality of parts of a body of the user.

15 18. The method of claim 11 further comprising the step of moving the apparatus along at least one axis.

19. An apparatus for physical fitness training comprising:
a fluid propulsion system having a fluid discharge opening;
20 a user engaging mechanism secured to the propulsion system;
means adapted for delivering fluid through the fluid discharge opening in the propulsion system such that a stream of fluid is discharged from the propulsion system and the propulsion system thereby exerts a reaction force on the user engaging mechanism; and
means adapted for controlling the reaction force applied by the propulsion system to the
25 user engaging mechanism.

20. The apparatus of Claim 19, wherein the means adapted for controlling the reaction force comprises means adapted for altering a direction along which the fluid is discharged relative to the user engaging mechanism.

21. The apparatus of Claim 20, wherein the means adapted for altering the direction the fluid is discharged comprises means adapted for rotating the propulsion system relative to the user engaging mechanism.
- 5 22. The apparatus of Claim 19, wherein the means adapted for controlling the reaction force comprises means adapted for changing a rate at which fluid is discharged from the propulsion system.
- 10 23. The apparatus of Claim 22, wherein the means adapted for controlling the reaction force further comprises means adapted for changing a direction along which the fluid is discharged relative to the user engaging mechanism.
- 15 24. The apparatus of Claim 23, wherein the means adapted for changing the direction the fluid is discharged comprises means adapted for rotating the propulsion system relative to the user engaging mechanism.
25. A method for physical fitness training comprising the steps of:
delivering fluid through a fluid discharge opening in a propulsion system having a user engaging mechanism secured relative to the propulsion system, such that a stream of fluid is discharged from the propulsion system and the propulsion system exerts a reaction force on the user engaging mechanism; and
controlling the reaction force applied by the propulsion system to the user engaging mechanism.
- 25 26. The method of Claim 25 further including the step of changing a direction along which fluid is discharged from the propulsion system relative to the user engaging mechanism.
27. The method of Claim 26, further comprising the step of rotating the propulsion system relative to the user engaging mechanism.

28. The method of Claim 25 further comprising the step of changing a rate at which fluid is discharged from the propulsion system.
29. The method of Claim 28 further comprising the step of altering a direction along which
5 the fluid is discharged relative to the user engaging mechanism.
30. The method of Claim 29 further comprising the step of rotating the propulsion system relative to the user engaging mechanism.

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